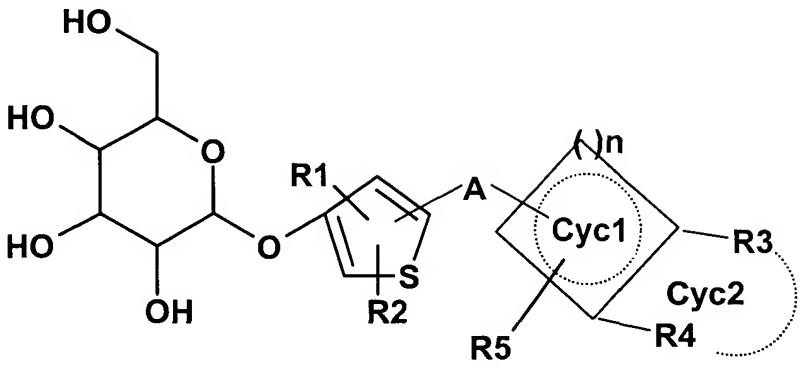
We claim:

1. A compound of the formula I



I

wherein

R1, R2 are, independently of each other, hydrogen, F, Cl, Br, I, OH, NO_2, CN, COOH, $CO(C_1\text{-}C_6)$-alkyl, $COO(C_1\text{-}C_6)$-alkyl, $CONH_2$, $CONH(C_1\text{-}C_6)$-alkyl, $CON[(C_1\text{-}C_6)\text{-alkyl}]_2$, $(C_1\text{-}C_6)$-alkyl, $(C_2\text{-}C_6)$-alkenyl, $(C_2\text{-}C_6)$-alkynyl, $(C_1\text{-}C_6)$-alkoxy, $HO\text{-}(C_1\text{-}C_8)$-alkyl, $(C_1\text{-}C_6)\text{-alkoxy-}(C_1\text{-}C_6)$-alkyl, phenyl, benzyl, or $(C_1\text{-}C_4)$-alkylcarbonyl,

wherein one, more than one or all hydrogens in the alkyl or alkoxy radicals are optionally replaced by fluorine;

$SO_2\text{-}NH_2$, $SO_2NH(C_1\text{-}C_6)$-alkyl, $SO_2N[(C_1\text{-}C_6)\text{-alkyl}]_2$, $S\text{-}(C_1\text{-}C_6)$-alkyl, $S\text{-}(CH_2)_o$-phenyl, $SO\text{-}(C_1\text{-}C_6)$-alkyl, $SO\text{-}(CH_2)_o$-phenyl, $SO_2\text{-}(C_1\text{-}C_6)$-alkyl, or $SO_2\text{-}(CH_2)_o$-phenyl,

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

wherein o is 0-6 and wherein the phenyl radical is optionally substituted up to twice, each substituent chosen independently from F, Cl, Br, OH, CF_3, NO_2, CN, OCF_3, $(C_1\text{-}C_6)$-alkoxy, $(C_1\text{-}C_6)$-alkyl, and NH_2;

NH_2, NH-$(C_1\text{-}C_6)$-alkyl, N$((C_1\text{-}C_6)\text{-alkyl})_2$, NH$(C_1\text{-}C_7)$-acyl, phenyl, or O-$(CH_2)_o$-phenyl,

wherein o is 0-6 and wherein the phenyl ring is optionally substituted one to 3 times, each substituent chosen independently from F, Cl, Br, I, OH, CF_3, NO_2, CN, OCF_3, $(C_1\text{-}C_6)$-alkoxy, $(C_1\text{-}C_6)$-alkyl, NH_2, NH$(C_1\text{-}C_6)$-alkyl, N$((C_1\text{-}C_6)\text{-alkyl})_2$, $SO_2\text{-}CH_3$, COOH, COO-$(C_1\text{-}C_6)$-alkyl, and $CONH_2$;

A is $(C_0\text{-}C_{15})$-alkanediyl, wherein one or more carbon atoms in the alkanediyl radical are optionally replaced, independently of one another, by -O-, -(C=O)-, -CH=CH-, -C≡C-, -S-, -CH(OH)-, -CHF-, -CF_2-, -(S=O)-, -(SO_2)-, -N$((C_1\text{-}C_6)$-alkyl)-, -N$((C_1\text{-}C_6)$-alkylphenyl)- or -NH-;

n is a number from 0 to 4;

Cyc1 is a 3- to 7-membered, saturated, partially saturated or unsaturated ring, wherein 1 carbon atom is optionally replaced by O or S;

R3, R4, R5 are, independently of each other, hydrogen, F, Cl, Br, I, OH, NO_2, CN, COOH, COO$(C_1\text{-}C_6)$-alkyl, CO$(C_1\text{-}C_4)$-alkyl, $CONH_2$,

FINNEGAN HENDERSON FARABOW GARRETT & DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

$CONH(C_1\text{-}C_6)$-alkyl, $CON[(C_1\text{-}C_6)\text{-alkyl}]_2$, $(C_1\text{-}C_8)$-alkyl, $(C_2\text{-}C_6)$-alkenyl, $(C_2\text{-}C_6)$-alkynyl, $(C_1\text{-}C_{12})$-alkoxy, HO-$(C_1\text{-}C_6)$-alkyl, or $(C_1\text{-}C_6)$-alkoxy-$(C_1\text{-}C_6)$-alkyl,

wherein one, more than one or all hydrogens in the alkyl and alkoxy radicals are optionally replaced by fluorine;

$SO_2\text{-}NH_2$, $SO_2NH(C_1\text{-}C_6)$-alkyl, $SO_2N[(C_1\text{-}C_6)\text{-alkyl}]_2$, S-$(C_1\text{-}C_6)$-alkyl, S-$(CH_2)_o$-phenyl, SO-$(C_1\text{-}C_6)$-alkyl, SO-$(CH_2)_o$-phenyl, SO_2-$(C_1\text{-}C_6)$-alkyl, or SO_2-$(CH_2)_o$-phenyl,

wherein o is 0-6 and wherein the phenyl radical is optionally substituted up to twice, each substituent chosen independently from F, Cl, Br, OH, CF_3, NO_2, CN, OCF_3, $(C_1\text{-}C_6)$-alkoxy, $(C_1\text{-}C_6)$-alkyl, and NH_2;

NH_2, NH-$(C_1\text{-}C_6)$-alkyl, $N((C_1\text{-}C_6)\text{-alkyl})_2$, $NH(C_1\text{-}C_7)$-acyl, phenyl, $(CH_2)_o$-phenyl, O-$(CH_2)_o$-phenyl,

wherein o is 0-6 and wherein the phenyl ring is optionally substituted one to 3 times, each substituent chosen independently from F, Cl, Br, I, OH, CF_3, NO_2, CN, OCF_3, $(C_1\text{-}C_8)$-alkoxy, $(C_1\text{-}C_6)$-alkyl, NH_2, $NH(C_1\text{-}C_6)$-alkyl, $N((C_1\text{-}C_6)\text{-alkyl})_2$, $SO_2\text{-}CH_3$, COOH, COO-$(C_1\text{-}C_6)$-alkyl, and $CONH_2$;

or

R3 and R4 together with the carbon atoms carrying them are a 5- to 7-membered, saturated, partially or completely unsaturated ring Cyc2,

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

wherein 1 or 2 carbon atoms in the ring are optionally replaced by N, O or S, and

wherein Cyc2 is optionally substituted by $(C_1\text{-}C_6)$-alkyl, $(C_2\text{-}C_5)$-alkenyl, $(C_2\text{-}C_5)$-alkynyl,

wherein, in each substituent of Cyc2, one CH_2 group is optionally replaced by O, or substituted by H, F, Cl, OH, CF_3, NO_2, CN, $COO(C_1\text{-}C_4)$-alkyl, $CONH_2$, $CONH(C_1\text{-}C_4)$-alkyl, or OCF_3, and

R5 is hydrogen;

or a pharmaceutically acceptable salt thereof.

2. A compound as claimed in claim 1, wherein A is linked to the thienyl ring in position 2.

3. A compound as claimed in claim 1, wherein

R1, R2 are, independently of each other, hydrogen, F, Cl, Br, I, OH, NO_2, CN, COOH, $CO(C_1\text{-}C_6)$-alkyl, $COO(C_1\text{-}C_6)$-alkyl, $CONH_2$, $CONH(C_1\text{-}C_6)$-alkyl, $CON[(C_1\text{-}C_6)\text{-alkyl}]_2$, $(C_1\text{-}C_8)$-alkyl, $(C_2\text{-}C_6)$-alkenyl, $(C_2\text{-}C_6)$-alkynyl, $(C_1\text{-}C_6)$-alkoxy, $HO\text{-}(C_1\text{-}C_6)$-alkyl, $(C_1\text{-}C_6)$-alkoxy-$(C_1\text{-}C_6)$-alkyl, phenyl, benzyl, $(C_1\text{-}C_4)$-alkylcarbonyl, or $SO\text{-}(C_1\text{-}C_6)$-alkyl,

wherein one, more than one or all hydrogens in the alkyl or alkoxy radicals are optionally replaced by fluorine;

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

A is $(C_0\text{-}C_{15})$-alkanediyl, wherein one or more carbon atoms in the alkanediyl radical are optionally replaced, independently of one another, by -O-, -(C=O)-, -CH=CH-, -C≡C-, -S-, -CH(OH)-, -CHF-, -CF_2-, -(S=O)-, -(SO_2)-, -N($(C_1\text{-}C_6)$-alkyl)-, -N($(C_1\text{-}C_6)$-alkylphenyl)- or -NH-;

n is a number 2 or 3;

Cyc1 is a 5- to 6-membered, saturated, partially saturated or unsaturated ring, wherein 1 carbon atom is optionally replaced by O or S;

R3, R4, R5 are, independently of each other, hydrogen, F, Cl, Br, I, OH, NO_2, CN, COOH, COO$(C_1\text{-}C_6)$-alkyl, CO$(C_1\text{-}C_4)$-alkyl, $CONH_2$, CONH$(C_1\text{-}C_6)$-alkyl, CON$[(C_1\text{-}C_6)\text{-alkyl}]_2$, $(C_1\text{-}C_8)$-alkyl, $(C_2\text{-}C_6)$-alkenyl, $(C_2\text{-}C_6)$-alkynyl, $(C_1\text{-}C_{12})$-alkoxy, HO-$(C_1\text{-}C_6)$-alkyl, $(C_1\text{-}C_6)$-alkoxy-$(C_1\text{-}C_6)$-alkyl, $(C_1\text{-}C_4)$-alkylphenyl, $(C_1\text{-}C_4)$-alkoxyphenyl, S-$(C_1\text{-}C_6)$-alkyl, or SO-$(C_1\text{-}C_6)$-alkyl,

wherein one, more than one or all hydrogens in the alkyl or alkoxy radicals are optionally replaced by fluorine;

or

R3 and R4 together with the carbon atoms carrying them are a 5- to 7-membered, saturated, partially or completely unsaturated ring Cyc2,

wherein 1 or 2 carbon atoms in the ring are optionally replaced by N, O or S, and

wherein Cyc2 is optionally substituted by $(C_1\text{-}C_6)$-alkyl, $(C_2\text{-}C_5)$-alkenyl, or $(C_2\text{-}C_5)$-alkynyl,

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

wherein in each substituent of Cyc2,one CH_2 group is optionally replaced by O, or substituted by H, F, Cl, OH, CF_3, NO_2, CN, $COO(C_1-C_4)$-alkyl, $CONH_2$, $CONH(C_1-C_4)$-alkyl, or OCF_3, and

R5 is hydrogen.

4. A compound as claimed in claim 1, wherein

R1, R2 are, independently of each other, hydrogen, (C_1-C_6)-alkyl, (C_1-C_4)-alkoxy, $HO-(C_1-C_4)$-alkyl, (C_1-C_4)-alkoxy-(C_1-C_4)-alkyl, F, Cl, CF_3, OCF_3, OCH_2CF_3 (C_1-C_4)-alkyl-CF_2-, phenyl, benzyl, (C_1-C_4)-alkylcarbonyl, (C_2-C_4)-alkenyl, (C_2-C_4)-alkynyl, or $COO(C_1-C_4)$-alkyl;

A is $-CH=CH-CH_2-$ or (C_1-C_4)-alkanediyl,

wherein one or two CH_2 groups are optionally replaced by -(C=O)-, -CH=CH-, -CH(OH)-, -NH-, -CHF-, $-CF_2-$, or -O-;

n is a number 2 or 3;

Cyc1 is unsaturated ring, wherein 1 carbon atom is optionally replaced by O or S;

R3, R4, R5 are, independently of each other, hydrogen, F, Cl, Br, I, NO_2, OH, CN, (C_1-C_6)-alkyl, (C_1-C_8)-alkoxy, OCF_3, OCH_2CF_3, $S-(C_1-C_4)$-

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

alkyl, COOH, HO-(C_1-C_4)-alkyl, (C_1-C_4)-alkoxy-(C_1-C_4)-alkyl, (C_1-C_2)-alkylphenyl, or (C_1-C_2)-alkoxyphenyl, or

R3 and R4 together are -CH=CH-O-, -CH=CH-S-, -O-$(CH_2)_p$-O-, -O-CF_2-O-, or -CH=CH-CH=CH-, wherein p = 1 or 2, and

R5 is hydrogen.

5. A compound as claimed in claim 1, wherein R2 is hydrogen.

6. A compound as claimed in claim 1, wherein

R1 is hydrogen, CF_3, (C_1-C_4)-alkyl, or phenyl,

R2 is hydrogen,

A is -CH_2-, -C_2H_4-, -C_3H_6, -CH(OH)-, –(C=O)-, -CH=CH-, -CH=CH-CH_2-, -CO-CH_2-CH_2- or –CO-NH-CH_2-;

n is a number 2 or 3;

Cyc1 is unsaturated ring, wherein 1 carbon atom is optionally replaced by S;

R3,R4,R5 are, independently of each other, hydrogen, F, Cl, I, NO_2, OH, CN, (C_1-C_6)-alkyl, (C_1-C_8)-alkoxy, O-CH_2-phenyl, OCF_3, S-CH_3, or COOH or

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

R3 and R4 together are -CH=CH-O-, -O-$(CH_2)_p$-O-, -O-CF_2-O-, -CH=CH-CH=CH-, wherein p = 1 or 2, and

R5 is hydrogen.

7. A compound as claimed in claim 1, wherein

A is -CH_2- or –CH_2-CH_2-.

8. A compound as claimed in claim 1, wherein

Cyc1 is phenyl.

9. A compound as claimed in claim 1, wherein

Cyc1 is thienyl.

10. A compound as claimed in claim 1, wherein

Cyc1 is monosubstituted.

11. A medicament comprising at least one compound as claimed in claim 1.

12. A medicament comprising at least one compound as claimed in claim 1 and at least one more blood glucose-lowering active ingredient.

13. A method for treating type 1 or type 2 diabetes, comprising administering to a patient in need thereof an effective amount of at least one compound as claimed in claim 1.

14. A method for lowering blood glucose, comprising administering to a patient in need thereof an effective amount of at least one compound as claimed in claim 1.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

15. A method for treating type 1 or type 2 diabetes, comprising administering to a patient in need thereof an effective amount of at least one compound as claimed in claim 1 and at least one other active ingredient, wherein the at least one other active ingredient is effective for lowering blood glucose.

16. A method for lowering blood glucose, comprising administering to a patient in need thereof an effective amount of at least one compound as claimed in claim 1 and at least one other active ingredient, wherein the at least one other active ingredient is effective for lowering blood glucose.

17. A process for producing a medicament comprising at least one compound as claimed in claim 1, comprising:
mixing the at least one compound as claimed in claim 1 with a pharmaceutically suitable carrier, and
converting this mixture into a form suitable for administration.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com